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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/708,533	03/10/2004	Kurt Hakan Carlsson	71354-0134	9645
20915	7590	12/27/2005	EXAMINER	
MCGARRY BAIR PC 171 MONROE AVENUE, N.W. SUITE 600 GRAND RAPIDS, MI 49503			LEUNG, PHILIP H	
			ART UNIT	PAPER NUMBER
			3742	

DATE MAILED: 12/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/708,533

Applicant(s)

CARLSSON ET AL.

Examiner

Philip H. Leung

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 12 October 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 21-70 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 21-70 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

### DETAILED ACTION

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 21, 29-37, 50-52 and 70 are rejected under 35 U.S.C. 103(a) as being obvious over Nakagawa (JP 1-30194), in view of Perlman et al (US 6,060,700) or Stutman (US 6,759,636) (all previously cited).

Nakagawa shows a distributed microwave cooking system, comprising: a microwave generator 1 having an output for providing a single source of microwave energy; multiple cooking elements 9, 10 located remotely from the microwave generator 1; a microwave conduit (branch waveguide 4 having branches) connecting each of the cooking elements to the microwave generator 1; wherein the microwave energy generated by the microwave generator is distributed to the multiple cooking elements through the microwave conduits (see Figures 1-3 and the English abstract). Therefore, Nakagawa shows every feature as claimed except that it does not specify the use of the heating elements 9, 10 as in a vehicle or as a cup warmer.

Perlman shows a microwave oven used inside a vehicle for heating food or as a cup warmer (see Figures 1-3 and col. 6, line 1 – col. 7, line 38). Stutman also shows a microwave oven for used in a vehicle having a door 160 on the top of the housing cabinet 200 (see Figures 2 and 3). It would have been obvious to an ordinary skill in the art at the time of invention to modify

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Nakagawa to use its device in a vehicle for heating food or beverages as a cup warmer to increase its utilities, in view of the teaching of Perlman or Stutman. The exact connection and location of the cooking elements would have been a matter of engineering expediency depending on the overall structure of the vehicle.

3. Claims 22-28, 38-43 and 53-63 are rejected under 35 U.S.C. 103(a) as being obvious over Nakagawa (JP 1-30194), in view of Perlman et al (US 6,060,700) or Stutman (US 6,759,636), as applied to claims 21, 29-37, 50-52 and 70 above, and further in view of Berggren (US 4,323,745) (previously cited).

As set forth above, Nakagawa combined with Perlman or Stutman shows every feature as claimed except that it uses a branch waveguide as the microwave transmission conduit. Berggren shows a microwave heating device having a single microwave generator and plural feed ports connected by microwave conduits (43, 44). The conduits are either waveguides or coaxial cables (see Figure 4 and col. 3, lines 3-27). It would have been obvious to an ordinary skill in the art at the time of invention to further modify Nakagawa combined with Perlman or Stutman to use a coaxial cable or a branched waveguide as the microwave transmission conduits for feeding microwave energy from the single microwave source to each heating element depending on the overall system requirement, in view of the teaching of Berggren. Obviously, the use of a coaxial cable provides a flexible connection.

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4. Claims 44-49 and 64-69 are rejected under 35 U.S.C. 103(a) as being obvious over Nakagawa (JP 1-30194), in view of Perlman et al (US 6,060,700) or Stutman (US 6,759,636), as applied to claims 21, 29-37, 50-52 and 70 above, and further in view of Jensen (US 5,315,084) or Takizaki (US 4,814,570) (all previously cited).

As set forth above, Nakagawa combined with Perlman or Stutman shows every feature as claimed except for the use of a sensor. Jensen shows a microwave oven for heating bottles of liquid food with the use of a weight sensor 88 as a load sensor to determine the volume of liquid to be heated (see Figure 2 and col. 3, lines 37-56). Takizaki also shows that it is well known in the art of microwave heating devices to include many type of sensing devices including a temperature sensor 11 and a weight sensor 9 to control the heating of food (see Figure 9 and col. 6, line 38 – col. 7, line 4). It would have been further obvious to an ordinary skill in the art at the time of invention to modify Nakagawa combined with Perlman or Stutman to use a temperature sensor and/or a weight sensor to monitor the heating conditions of the food material for better heating control and better food product, in view of the teaching of Jensen or Takizaki.

5. Applicant's arguments filed 10-12-2005 have been fully considered but they are not persuasive. As set forth above, Nakagawa clearly shows a microwave heating device having all the structure as claimed except that it does not show the use of its device in a vehicle. However, the use of a microwave oven in a vehicle is known as shown in Perlman and Stutman. It would have been readily obvious to an ordinary skill in the art that any suitable microwave heating device can be used in a vehicle in view of the references. The argument that Nakagawa does not disclose a microwave generator that is "remotely spaced" from a microwave cooking element is

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not well taken. More particularly, Nakagawa uses a microwave generator 1 remotely spaced from the two heating chambers 9 and 10 so that it can be used for supplying microwave energy to one or more heating chambers. The generator 1 is considered remotely spaced from the chambers as they are not formed in a same housing of a conventional oven. The argument that “remotely spaced” means that the oscillator is spaced at some significant distance from the cooking element is without merit as the claims do not reflect any location that is significant distance from the heating element. More importantly, any location within a vehicle would be a matter of engineering design expediency as the use of the trunk of a vehicle for storing auxiliary devices, such as CD players, batteries is well known. Obviously, the heating chambers of Nakagawa can be located in different areas for different users. Stutman and Perlman are relied on to show mainly the combination of a vehicle with a microwave heating device. In regard to claim 51, the claim does not even require a vehicle; clearly the heating chambers of Nakagawa can be used for warming the contents of food in any well known suitable containers such as a cup as claimed. The argument that “Berggren is non-analogous prior art” is not well taken as all of the references are directed to a microwave heating devices with a microwave supply element for supplying microwave energy from the microwave generator to a microwave heating element. In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir.

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1992). In this case, one of ordinary skill would be aware that the use of waveguides or coaxial cables for connecting the microwave generator and the heating elements is well known and therefore the use of either one would have been a mere choice in view of Berggren (see col. 2, lines 55-58). It is respectfully submitted that to use any well known elements in a known way as shown by each of these references would have been readily obvious to an ordinary artisan and needs no explicit teaching.

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Philip H Leung whose telephone number is (571) 272-4782.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robin Evans can be reached on (571) 472-4777. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read "Philip H Leung". The signature is fluid and cursive, with a large initial "P" and "L".

Philip H Leung  
Primary Examiner  
Art Unit 3742

P.Leung/pl  
12-21-2005